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Tyr Ile Gly Pro Cys Lys Tyr Ile Pro Pro Cys Leu Asp Ser Glu Leu 130 Thr Glu Phe Pro Leu Arg Met Arg Asp Trp Leu Lys Asn Val Leu Val 145 Thr Leu Tyr Glu Arg Asp Glu Asp Asn Asn Leu Leu Thr Glu Lys Gln 160 Thr Leu Tyr Glu Arg Asp Glu Asp Asn Asn Leu Leu Thr Glu Lys Gln 180 Thr Leu Tyr Glu Lys Lys Ile His Glu Asn Glu Lys Arg Leu Glu Ala 180 Gly Asp His Pro Val Glu Leu Leu Ala Arg Asp Cys Gln Ala Val Ser 195 Ala Arg Lys Ala Lys Ile Lys Ser Glu Met 215 210 <pre> </pre> <pre> </pre> <pre> </pre> <pre> <pre> </pre> <pre> </pre> <pre> <pre> </pre> <pre> <pre> <pre> <pre> </pre> <pre> <pr< td=""><td></td><td></td><td>-</td><td></td><td>100</td><td></td><td></td><td>-</td><td></td><td>105</td><td></td><td></td><td></td><td></td><td>110</td><td></td><td></td></pr<></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre>			-		100			-		105					110		
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145	-		130		_	_	_	135			_		140				
160		145					150		_	_		155					
180		ьеи	ıyı	Glu	Arg		GIU	Asp	ASII	ASII		ьeu	LIFE	GIU	гуѕ		
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Met Lys Thr Leu Gln Ser Thr Leu Leu Leu Leu Leu Leu Leu Val -15 -10 -5 cct ctg ata aag cca gca cca cca acc cag cag gac tca cgc att atc Pro Leu Ile Lys Pro Ala Pro Pro Thr Gln Gln Asp Ser Arg Ile Ile 1 5 10 tat gat tat gga aca gat aat ttt gaa gaa tcc ata ttt agc caa gat Tyr Asp Tyr Gly Thr Asp Asn Phe Glu Glu Ser Ile Phe Ser Gln Asp 15 20 25 tat gag gat aaa tac ctg gat gga aaa aat att aag gaa aaa gaa act Tyr Glu Asp Lys Tyr Leu Asp Gly Lys Asn Ile Lys Glu Lys Glu Thr 30 35 40																_	
cct ctg ata aag cca gca cca cca acc cag cag gac tca cgc att atc Pro Leu Ile Lys Pro Ala Pro Pro Thr Gln Gln Asp Ser Arg Ile Ile 1 5 10 tat gat tat gga aca gat aat ttt gaa gaa tcc ata ttt agc caa gat 264 Tyr Asp Tyr Gly Thr Asp Asn Phe Glu Glu Ser Ile Phe Ser Gln Asp 15 20 25 tat gag gat aaa tac ctg gat gga aaa aat att aag gaa aaa gaa act Tyr Glu Asp Lys Tyr Leu Asp Gly Lys Asn Ile Lys Glu Lys Glu Thr 30 35 40	gcta		_	_	Thr I	Leu (_			Leu I	Leu I	_		_	Leu V	Jal	168
Tyr Asp Tyr Gly Thr Asp Asn Phe Glu Glu Ser Ile Phe Ser Gln Asp 15 20 25 tat gag gat aaa tac ctg gat gga aaa aat att aag gaa aaa gaa act Tyr Glu Asp Lys Tyr Leu Asp Gly Lys Asn Ile Lys Glu Lys Glu Thr 30 35 40		_		_	cca Pro	gca			Thr	cag	cag	_		Arg	att	atc	216
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gag	aac	tac		ttc	caa	cac	cac		cta	a a a	aac	aaa		~~~	~+~	E 0.4
Glu	λαη	Cyc	723	Dho	Cln	Hia	Cay	mb.	Tau	gaa	3	999	Tac	gac	gee	504
Giu	HOII		Arg	PIIE	GIII	птв		TILL	ьeu	GIU	Asn		Tyr	Asp	val	
		90					95					100				
tac	cac	tct	cct	cag	tat	cac	ttc	ctg	gtc	agt	ctg	ggc	cgg	gcg	aag	552
Tyr	His	Ser	Pro	Gln	Tyr	His	Phe	Leu	Val	Ser	Leu	Gly	Arg	Ala	Lys	
	105					110					115	_	_		-	
aga	gcc	ttc	ctq	cca	aac	atq	aac	cca	CCC	cca	tac	taa	cag	ttc	cta	600
Ara	Āla	Phe	Len	Pro	Glv	Met	Δen	Dro	Dro	Dro	Tyr	Ser	Gla	Dho	Tou	000
120				110	125	1100	Abii	110	rio		туг	Ser	GIII	PIIE		
										130					135	
LCC	egg	agg	aac	gag	atc	ccc	cta	att	cac	ttc	aac	acc	CCC	ata	cca	648
ser	Arg	Arg	Asn	GIu	Ile	Pro	Leu	Ile	His	Phe	Asn	Thr	Pro	Ile	Pro	
				140					145					150		
cgg	cgg	cac	acc	cgg	agc	gcc	gag	gac	gac	tcg	gag	cgg	gac	CCC	ctq	696
Arg	Arg	His	Thr	Arg	Ser	Ala	Glu	Asp	Asp	Ser	Glu	Ara	Asp	Pro	Leu	
			155	_				160	-				165			
aac	ata	cta	aad	CCC	caa	מככ	caa		acc	cca	gcc	cca		taa	tat	744
Δsn	Val	Len	Live	Dro	723	712	723	Mot	Thr.	Dro	Ala	Dwa	77-	2	cgc	/44
11511	vai		цуз	FIU	Arg	Ата		Mer	TIIL	PIO	Ala		Ата	ser	Cys	
		170					175					180				
tca	cag	gag	ctc	ccg	agc	gcc	gag	gac	aac	agc	ccg	atg	gcc	agt	gac	792
Ser	GIn	Glu	Leu	Pro	Ser	Ala	Glu	Asp	Asn	Ser	Pro	Met	Ala	Ser	Asp	
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cca	tta	ggg	gtg	gtc	agg	ggc	ggt	cga	gtg	aac	acg	cac	act	aaa	qqa	840
Pro	Leu	Gly	Val	Val	Arq	Glv	Glv	Ara	Val	Asn	Thr	His	Δla	Glv	Glv	
200		-			205	4		3		210					215	
	aac	cca	gaa	aac		cac	CCC	++~	acc		ttc	2 ± G	+ > 00	.at aa		000
Thr	G14	Dro	Clu	990	Crea	7	Dona	Db-	31-	aag	Phe	alc	Lage	greg	JCE	889
1111	Gry	FIO	Giu		Cys	Arg	PIO	Pne		гÀг	Pne	тте				
				220					225							
ggaa	gggc	ac c	ctct	ttaa	c cc	atco	ctca	gca	aacg	Jcag	ctct	tccc	aa g	gacc	aggtc	949
cctt	gacg	tt c	cgag	gatç	ıg ga	aagg	tgac	agg	ıggca	ıtgt	atgg	aatt	tg c	tgct	tctct	1009
9999	tccc	tt c	caca	ggag	g ta	ctgt	gaga	acc	aacc	ttt	gagg	ccca	ag t	catq	gggtt	1069
tcac	cgcc	tt c	ctca	ctcc	a ta	taga	acac	ctt	tccc	aat	agga	aacc	cc a	acad	gtaaa	1129
ctaq	aaat	tt c	ccct	tcat	g aa	ggta	gaga	gaa	aaaa	itat	atac	caac	at a	tttc	tcttc	1189
ctta	tacc	tc +	aatio	ttta	t ca	cttt	taad	רבי∟	בבבבי	222	aaaa	2222	22			1239
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Gly	Ser 10	Ser		Gly	Gly	Leu 15	Ile	_	Leu	Tyr	Thr 20	_	Thr	Ala	Arg	
Asn 25	Ser	Tyr	His	Leu	Gln 30		His	Lys	Asn	Gly 35		Val	Asp	Gly	Ala 40	
	His	Gln	Thr	Ile 45		Ser	Ala	Leu	Met 50		Arg	Ser	Glu	Asp 55		
Gly	Phe	Val	Val 60		Thr	Gly	Val	Met 65		Arg	Arg	Tyr	Leu 70		Met	
Asp	Phe	Arg 75		Asn	Ile	Phe	Gly 80		His	Tyr	Phe	Asp 85		Glu	Asn	
Cys	Arg 90	Phe	Gln	His	Gln	Thr 95		Glu	Asn	Gly	Tyr 100	-	Val	Tyr	His	
Ser 105	Pro	Gln	Tyr	His	Phe 110		Val	Ser	Leu	Gly 115		Ala	Lys	Arg	Ala 120	
	Leu	Pro	Gly	Met 125		Pro	Pro	Pro	Tyr 130		Gln	Phe	Leu	Ser 135		
Arg	Asn	Glu	Ile 140		Leu	Ile	His	Phe 145		Thr	Pro	Ile	Pro 150		Arg	
His	Thr	Arg 155	Ser	Ala	Glu	Asp	Asp 160		Glu	Arg	Asp	Pro 165		Asn	Val	
Leu	Lys 170	Pro	Arg	Ala	Arg	Met 175		Pro	Ala	Pro	Ala 180		Cys	Ser	Gln	
Glu 185	Leu	Pro	Ser	Ala	Glu 190	Asp	Asn	Ser	Pro	Met 195		Ser	Asp	Pro	Leu 200	
Gly	Val	Val	Arg	Gly 205	Gly	Arg	Val	Asn	Thr 210		Ala	Gly	Gly	Thr 215		
Pro	Glu	Gly	Cys 220	Arg	Pro	Phe	Ala	Lys 225	Phe	Ile						
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cgg Arg	ctc Leu	aga Arg	gcc Ala	cag Gln	gtg Val	cgc Arg	ctg Leu	ctt Leu	gag Glu	acc Thr	cgg Arg	gtc Val	aaa Lys	cag Gln	caa	166

	5	1	.0	15		
cag gtc aag Gln Val Lys 20						214
gat aaa gga Asp Lys Gly 35						262
tat gca gat Tyr Ala Asp 50		att ttc a				310
ttt tac aaa Phe Tyr Lys					_	358
tgt gac atg Cys Asp Met		Gly Gly T				406
gat ggc agt Asp Gly Ser 100	-			-		454
ttt gga amt Phe Gly Xaa 115						502
aat ctt cac Asn Leu His 130		Thr Gln G				550
ctt gca gat Leu Ala Asp	_	-	-	-	•	598
aaa gtt gga Lys Val Gly		Asn Phe T			/ Glu Tyr	646
tct gga aca Ser Gly Thr 180						694
cag tgg tgg Gln Trp Trp 195						742
gat cat gac Asp His Asp 210		Gly Asn C				790
tgg tgg ttt Trp Trp Phe			_			838
agc ggc ccc Ser Gly Pro		Lys Thr A			Tyr Thr	886
tgg cat ggg Trp His Gly 260		_		_		934
cca aat gat Pro Asn Asp 275			_	gc tgttgggd	tt	981
tcgtttctgc a catgcgcaat o tacttaatgt o tcaaaaaaaa	catgataact g gctttcagta d	gtttaaagt ttgtgagta	gtgcttttca	ttcttctcac	ttgcctttgt	1101

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Leu Asp Lys Gly Asp Glu Asn Thr Val Val Asp Leu Gly Ser Lys Arg
Gln Tyr Ala Asp Cys Ser Glu Ile Phe Asn Asp Gly Tyr Lys Lèu Ser
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Gly Phe Tyr Lys Ile Lys Pro Leu Gln Ser Pro Ala Glu Phe Ser Val
Tyr Cys Asp Met Ser Asp Gly Gly Trp Thr Val Ile Gln Arg Arg
                                    90
Ser Asp Gly Ser Glu Asn Phe Asn Arg Gly Trp Lys Asp Tyr Glu Asn
                                105
Gly Phe Gly Xaa Phe Val Gln Lys His Gly Glu Tyr Trp Leu Gly Asn
                            120
        115
Lys Asn Leu His Phe Leu Thr Thr Gln Glu Asp Tyr Thr Leu Lys Ile
                        135
Asp Leu Ala Asp Phe Glu Lys Asn Ser Arg Tyr Ala Gln Tyr Lys Asn
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Phe Lys Val Gly Asp Glu Lys Asn Phe Tyr Glu Leu Asn Ile Gly Glu
                                    170
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Tyr Ser Gly Thr Ala Gly Asp Ser Leu Ala Gly Asn Phe His Pro Glu
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                                185
Val Gln Trp Trp Ala Ser His Gln Arg Met Lys Phe Ser Thr Trp Asp
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Arg Asp His Asp Asn Tyr Glu Gly Asn Cys Ala Glu Glu Asp Gln Ser
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                                             220
Gly Trp Trp Phe Asn Arg Cys His Xaa Ala Asn Leu Asn Gly Val Tyr
                                        235
                    230
Tyr Ser Gly Pro Tyr Thr Ala Lys Thr Asp Asn Gly Ile Val Trp Tyr
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Thr Trp His Gly Trp Trp Tyr Ser Leu Lys Ser Val Val Met Lys Ile
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															cagage	240
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															act	356
5	,	•	, ,	55.	•			_	_						g Thr	
cgg	gaa	gct	ggc	tgc	gtg	gcc	gct	ggt	gtg	gtt	atc	ggg	gct	ggt	gcc	404
Arg	Glu	Ala	Gly	Cys	Val	Ala	Ala	Gly	Val		Ile	Gly	Ala	Gly		
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tgc	tac	tgt	gta	tac	aga	ctg	gct	tgg	gga	aga	gac	gag	aac	gag	aaa	452
Cys	Tyr	Cys		Tyr	Arg	ьeu	Ala	Trp	GIA	Arg	Asp	GIU	15	GIU	гуѕ	
atc	taa	gac	5 gaa	gac	gag	gag	tct		gac	acc	t.ca	kaq		aaa	att	500
Tle	Trn	Asp	Glu	Asp	Glu	Glu	Ser	Thr	Asp	Thr	Ser	Xaa	Ile	Gly	Val	
110	*-P	20	014	110 F			25					30		-		
gag	act	gtg	aaa	gga	gct	aaa	act	aac	gct	ggg	gca	ggg	tct	ggg	gcc	548
Glu	Thr	Val	Lys	Gly	Ala	Lys	Thr	Asn	Ala	Gly	Ala	Gly	Ser	${ t Gly}$	Ala	
	35					40					45					
aaa	ctt	cag	ggt	gat	tca	gag	gtc	aag	cct	gag	gtg	agt	ttg	gga	ctc	596
	Leu	Gln	Gly	Asp		Glu	Val	Lys	Pro		Val	Ser	Leu	GIY	ьеи 65	
50				~~+	55		~~~	220	~~~	60	tas	aas	tac	Cac		644
gag	gat Acn	Cyc	Dro	ggu	y La	Lve	gag Glu	Lve	Δla	Hig	Ser	Glv	Ser	His	Ser	044
Giu	Asp	Сув	FIU	70	vai	цуз	Giu	цуБ	75	1115	501		001	80	501	
aaa	aat	aac	cta		qcc	aaq	gcc	aaq		ctt	ttc	aac	acg	ctg	aag	692
Gly	Gly	Gly	Leu	Glu	Āla	Lys	Āla	Lys	Āla	Leu	Phe	Asn	Thr	Leu	Lys	
			85					90					95			
gaa	cag	gca	agt	gca	aag	gca	ggc	aaa	ggg	gct	agg	gtg	ggt	acc	atc	740
Glu	Gln		Ser	Ala	Lys	Ala	Gly	Lys	Gly	Ala	Arg		Gly	Thr	Ile	
		100					105			~~~	+ ~ ~	110	~~~	~~~	200	788
CCC	ggg	aac	agg	acc	CLL	gca	ccg Pro	agt	LLa	Dro	Cve	Dro	Glv	ggc Glv	agg Arg	700
Sei	115	ASII	Arg	IIIL	ьeu	120	PLO	SEI	шeu	FIO	125	FIU	Сту	CLY	ALG	
aat		aac	tac	cac	ccc		agg	aqt	qqa	tct		qcc	ggg	ggc	agg	836
							Arg									
130					135					140					145	
gca	agt	gga	aaa	tcc	aag	gga	aag	gcc	cga	agt	aag	agc	acc	agg	gct	884
Ala	Ser	Gly	Lys		Lys	Gly	Lys	Ala		Ser	Lys	Ser	Thr		Ala	
				150					155					160		022
cca	gct	aca	aca	tgg	CCT	gtc	cgg Arg	aga	ggc	aag	Dho	Aac	Dhe	Dro	Tur	932
Pro	Ата	THE	165	пр	PIO	val	Arg	170	СТУ	пуъ	PIIC	ASII	175	PIO	TYL	
aaa	att	gat		att	cta	aαt	gct		gac	ctc	caa	aaq		ctc	aac	980
Lvs	Ile	Asp	Asp	Ile	Leu	Ser	Ala	Pro	Asp	Leu	Gln	Lys	Val	Leu	Asn	
-72		180					185		-			190				
							cct									1028
Ile	Leu	Glu	Arg	Thr	Asn	Asp	Pro	Phe	Ile	Gln		Val	Ala	Leu	Val	
	195					200					205					40=-
act	ctg	ggt	aac	aat	gca	gca	tat	tca	ttt	aac	cag	aat	gcc	ata	cgt	1076
	Leu	GTA	Asn	Asn		Ala	Tyr	ser	rne		GIN	ASN	нта	тте	Arg 225	
210	++~	aat	aat	a+a	215	a++	att	ac s	222	220	222	222	222		223	1118
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Glu Asn Glu Lys Ile Trp Asp Glu Asp Glu Glu Ser Thr Asp Thr Ser
Xaa Ile Gly Val Glu Thr Val Lys Gly Ala Lys Thr Asn Ala Gly Ala
Gly Ser Gly Ala Lys Leu Gln Gly Asp Ser Glu Val Lys Pro Glu Val
                    50
Ser Leu Gly Leu Glu Asp Cys Pro Gly Val Lys Glu Lys Ala His Ser
                                    70
Gly Ser His Ser Gly Gly Gly Leu Glu Ala Lys Ala Lys Ala Leu Phe
                                85
Asn Thr Leu Lys Glu Gln Ala Ser Ala Lys Ala Gly Lys Gly Ala Arg
                            100
Val Gly Thr Ile Ser Gly Asn Arg Thr Leu Ala Pro Ser Leu Pro Cys
                        115
                                             120
Pro Gly Gly Arg Gly Gly Cys His Pro Thr Arg Ser Gly Ser Arg
                    130
Ala Gly Gly Arg Ala Ser Gly Lys Ser Lys Gly Lys Ala Arg Ser Lys
                145
                                    150
Ser Thr Arg Ala Pro Ala Thr Thr Trp Pro Val Arg Arg Gly Lys Phe
                                165
                                                     170
Asn Phe Pro Tyr Lys Ile Asp Asp Ile Leu Ser Ala Pro Asp Leu Gln
                            180
                                                185
Lys Val Leu Asn Ile Leu Glu Arg Thr Asn Asp Pro Phe Ile Gln Glu
                        195
                                             200
Val Ala Leu Val Thr Leu Gly Asn Asn Ala Ala Tyr Ser Phe Asn Gln
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Lys Lys
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			gtc					cag Gln								145
						_		ttc Phe	_		_			_	_	193
gaa								aca Thr								241
								gaa Glu 60								289
								cct Pro								337
								gct Ala								385
								gat Asp								433
_	_		_				_	gga Gly			_	_				481
_						_	_	ggc Gly 140	_							529
Ile	Ala	Ala 150	Asn	Val	Leu	Val	Phe 155	tgt Cys	Leu	Trp	Arg	Val 160	Pro	Ser	Leu	577
Gln	Arg 165	Thr	Met	Ile	Arg	Tyr 170	Phe	aca Thr	Ser	Asn	Pro 175	Ala	Ser	Lys	Val	625
Leu 180	Cys	Ser	Pro	Met	Leu 185	Leu	Ser	aca Thr	Phe	Ser 190	His	Phe	Ser	Leu	Phe 195	673
His	Met	Ala	Ala	Asn 200	Met	Tyr	Val	ttg Leu	Trp 205	Ser	Phe	Ser	Ser	Ser 210	Ile	721
								ttc Phe 220								769
								tac Tyr								817
								gcc Ala								865

913

gat aca gca gga atg atc ctg gga tgg aaa ttt ttt gat cat gcg gca Asp Thr Ala Gly Met Ile Leu Gly Trp Lys Phe Phe Asp His Ala Ala

260 265 270	275
cat ctt ggg gga gct ctt ttt gga ata tgg tat gt His Leu Gly Gly Ala Leu Phe Gly Ile Trp Tyr Va	
280 285	290
gaa ctg att tgg aag aac agg gag ccg cta gtg aa	
Glu Leu Ile Trp Lys Asn Arg Glu Pro Leu Val Ly	s Ile Trp His Glu
295 300	305
ata agg act aat ggc ccc aaa aaa gga ggt ggc tc	
Ile Arg Thr Asn Gly Pro Lys Lys Gly Gly Gly Se	320
attggacagt agtggtgcat ctggtccttg ccgcctgaga gc	
gagtgaccat ggctatgctc ccgtctggaa gatgccagca to	
agctgtgtcc cccagtccgt gtctttttag aatgtgaatg at	gataaagt tgtgaaataa 1238
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10 15	20
Gln Lys Cys Gly Phe Arg Lys Ala Pro Arg Lys Va 25 30	35 ·
Ser Asp Pro Gly Thr Ser Gly Glu Ala Tyr Lys Ar	
40 45 50	
Pro Pro Val Glu Glu Thr Val Phe Tyr Pro Ser Pr	o Tyr Pro Ile Arg
55 60 65 Ser Leu Tle Lyg Pro Leu Pho Pho Thr Val Cly Ph	70
Ser Leu Ile Lys Pro Leu Phe Phe Thr Val Gly Ph 75 80	e Thr Gly Cys Ala 85
Phe Gly Ser Ala Ala Ile Trp Gln Tyr Glu Ser Le	
90 95	100
Gln Ser Tyr Phe Asp Gly Ile Lys Ala Asp Trp Le	
105 110 Pro Gln Lys Glu Gly Asp Phe Arg Lys Glu Ile As	115
120 125 13	
Asn Leu Ser Asp Gly Gln Arg Thr Val Thr Gly Il	
135 140 145	150
Val Leu Val Phe Cys Leu Trp Arg Val Pro Ser Le	
155 160 Ile Arg Tyr Phe Thr Ser Asn Pro Ala Ser Lys Va	165
170 175	180
Met Leu Leu Ser Thr Phe Ser His Phe Ser Leu Ph	
185 190	195
Asn Met Tyr Val Leu Trp Ser Phe Ser Ser Il	
200 205 21 Gly Gln Glu Gln Phe Met Ala Val Tyr Leu Ser Al	
215 220 225	230
Asn Phe Val Ser Tyr Val Gly Lys Val Ala Thr Gl	
235 240	245
Ser Leu Gly Ala Ala Leu Lys Ala Ile Ile Ala Me	~ -
250 255 Met Ile Leu Gly Trp Lys Phe Phe Asp His Ala Al	260 a His Leu Gly Gly
265 270	275
_ · · •	- · -

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Gly Pro Lys Lys Gly Gly Gly Ser Lys
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              Met Asp Ser Ser Thr Ala His Ser Pro Val Phe Leu Val
ttt cct cca gaa atc act gct tca gaa tat gag tcc aca gaa ctt tca
                                                                    159
Phe Pro Pro Glu Ile Thr Ala Ser Glu Tyr Glu Ser Thr Glu Leu Ser
                        20
gcc acg acc ttt tca act caa agc ccc ttg caa aaa tta ttt gct aga
                                                                    207
Ala Thr Thr Phe Ser Thr Gln Ser Pro Leu Gln Lys Leu Phe Ala Arg
30
                    35
                                         40
aaa atg aaa atc tta ggg act atc cag atc ctg ttt gga att atg acc
                                                                    255
Lys Met Lys Ile Leu Gly Thr Ile Gln Ile Leu Phe Gly Ile Met Thr
                                     55
ttt tct ttt gga gtt atc ttc ctt ttc acc ttg tta aaa cca tat cca
                                                                    303
Phe Ser Phe Gly Val Ile Phe Leu Phe Thr Leu Leu Lys Pro Tyr Pro
            65
                                70
agg ttt ccc ttt ata ttt ctt tca gga tat cca ttc tgg ggc tct gtt
                                                                    351
Arg Phe Pro Phe Ile Phe Leu Ser Gly Tyr Pro Phe Trp Gly Ser Val
                            85
ttg ttc att aat tct gga gcc ttc cta att gca gtg aaa aga aaa acc
                                                                    399
Leu Phe Ile Asn Ser Gly Ala Phe Leu Ile Ala Val Lys Arg Lys Thr
                        100
                                             105
aca gaa act ctg ata ata ttg agc cga ata atg aat ttt ctt agt gcc
                                                                    447
Thr Glu Thr Leu Ile Ile Leu Ser Arg Ile Met Asn Phe Leu Ser Ala
                    115
                                         120
ctg gga gca ata gct gga atc att ctc ctc aca ttt ggt ttc atc cta
                                                                    495
Leu Gly Ala Ile Ala Gly Ile Ile Leu Leu Thr Phe Gly Phe Ile Leu
                130
                                     135
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gtc t	-20 ca gg Ser Gl														210
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Leu Le	л цеи	Pne		Pne	TILL	ьeu	val		GIY	1111	GIY	AIA		цуб	
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gaac		Jal (ayaç	gatti	L at	ccas				Thi					l His	2,73
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30

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ccc atc ctg gtc tgg ctg ttc act cgt gat cac atg tct ggt tgg tgt
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Pro Ile Leu Val Trp Leu Phe Thr Arg Asp His Met Ser Gly Trp Cys
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	B 0	-1-	-1-	· · · ·	1	85				-	90	-				95	
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Cya Amer	aay	Dwo	Dho	uia	Cla	Clu	Acn	990	Acn	Val	Tle	Tyr	Δla	Phe	Val	
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	545			<b>.</b>				~~~	+			aat	cc.	202	at t	1836
cga	gat	CCT	gta	tgc	ata	acc	gta	gac	Tac	aaa Ta	Tou	cct	7xa	Thr	Wal	1030
_	Asp	ser	vaı	Cys		Thr	vaı	Asp	TÄT		ьeu	Pro	Arg	TIIL	575	
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Ala	Arg		GIN	ьeu	ьys	asn		rne	нта	пув	GIU	Glu	GIU	FIIE	FIO	
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Ser		Glu	ser	ьys	ser			ser	inr	GIN			AIA	ser	Gln	
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Lys Ile Gln Thr Asn Thr Asn Asp Ser Ser Glu Ile Glu Ty 20 25 30	
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Thr Cys Ser Gly Leu Arg Gly Ile Leu Gln Phe Glu Asn Va	
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Leu Lys Glu Gln Pro Met Asp Asp Asn Ile Phe Ile Ser Gl 145 150 155	lu Lys Ser 160
Glu Pro Ala Val Pro Asp Leu Phe Pro Leu Tyr Leu Glu Me	et His Ile 175
Val Val Asp Lys Thr Leu Tyr Asp Tyr Trp Gly Ser Asp Se	er Met Ile 90
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70!	5				710					715	;			Glu	720 Ser
Se:	r Sei	Glr	n Ala	725 Asp		Ser	. Lys				Glu	ı Asp	Ser	735 Ala	Glu
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cgg Arg	tca Ser	Leu	cat	gtc Val	tgt Cys	gtg Val 5	tcc Ser	ctc Leu	tgg Trp	tct Ser	gtc Val 10	cac His	cac His	agg Arg	cca Pro	97
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Ala	gcc Ala	Thr	Pro 50	Ala	Ser	Ala	Ala	Ala 55	Ala	Thr	Leu	Asp	Va1	АТА	vaı	241
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Gly	cag Gln 80	Leu	Asp	Arg	Pro	Pro 85	Asp	Leu	Ala	His	Asp 90	Gly	Arg	Ser	Leu	337
Trp 95	ctg Leu	Asn	Ile	Arg	Gly 100	Lys	Glu	Ala	Ala	Ala 105	Leu	Ser	Met	Phe	H1S 110	385
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175					180				a+ a	185	aat	taa	tat	ata	190	673
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Leu	Leu	Asp	Gly	Met	Leu	Asp	Gly		Val	Asn	Ser	Gly		Ala	Ala	
æ,	-		35	n 7	70.7	7A 71	7A 71	40	T	7. ~~ ~~	₹ <i>1</i> ~ 7	7 J ~	45 Val	7/~~	Ara	
Thr	Pro	Ala	ser	АТа	Ala	АТа	АІА	Inr	ьeu	Asp	val	AId	val	Ar 9	AT 9	

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Ccc   ggg
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agg       cct       ggg       gac       ctc       ggc       ggg       ggc       cga       ggc       cga       gcc       ctg       ggc       ctg       ctg       ctg       ctg       agc       ctg       leu       l
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Leu Gln Leu Arg Leu Leu Thr Pro Thr Phe Glu Gly Ile Asn Gly Leu 50 60  ttg ttg aaa caa cat tta gtt cag aat cca gtc aga ctc tgg caa ctt 290  Leu Leu Lys Gln His Leu Val Gln Asn Pro Val Arg Leu Trp Gln Leu 65 70 75   tta ggt ggt act ttc tat ttt aac acc tca agg ttg aag cag aag aat 338  Leu Gly Gly Thr Phe Tyr Phe Asn Thr Ser Arg Leu Lys Gln Lys Asn 80 85 90 95  aag gag aag gat aag tcg aag ggg aag gcg cct gaa gag gac gaa ggt 386  Lys Glu Lys Asp Lys Ser Lys Gly Lys Ala Pro Glu Glu Asp Glu Gly Gly 100 100 105 110  ata ttc atc tgatgttctt cagtcagtag ctgcctctgg atgtctttac 435  Ile Phe Ile rtttctgttt wccttttagc aaggtgaaac cagtctggam aatgggaga tgggccgggt 495  gcagtggctc acacttgtaa tcgaaacgct ttgggaggcc caggtggaag gatcacttga 555
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Leu       Leu       Lys       Gln       His       Leu       Val       Gln       Asn       Pro       Val       Arg       Leu       Trp       Gln       Leu         65       70       75       75         tta       ggt       ggt       act       ttc       tat       ttt       aac       acc       tca       agg       ttg       aag       cag       aag       aag       aag       aag       aag       aag       aag       tu       Lys       Gln       Lys       Asn       90       95       aag       aag       ggt       aag       ggt       aag       ggc       cct       gaa       gac       gaa       ggt       386         Lys       Glu       Lys       Asp       Lys       Ser       Lys       Gly       Lys       Ala       Pro       Glu       Glu       Asp       Glu       Gly       100       100       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110
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Leu Gly Gly Thr Phe Tyr Phe Asn Thr Ser Arg Leu Lys Gln Lys Asn 80
80 85 90 95  aag gag aag gat aag tcg aag ggg aag gcg cct gaa gag gac gaa ggt 386  Lys Glu Lys Asp Lys Ser Lys Gly Lys Ala Pro Glu Glu Asp Glu Gly  100 105 110  ata ttc atc tgatgttctt cagtcagtag ctgcctctgg atgtctttac 435  Ile Phe Ile  rtttctgttt wccttttagc aaggtgaaac cagtctggam aatggggaga tgggccgggt 495  gcagtggctc acacttgtaa tcgaaacgct ttgggaggcc caggtggaag gatcacttga 555
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310

315

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tee etg etg ett aat ett gee eet gee eet ett aat get gat tet gag
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1		5			~-3	_		<b>T</b>	<b>a</b> 1	1707	ח ד ה		Bro
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Leu Pile		ie neu	110	LCu	40	552		5		45	-		
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Tyr Glu	Gln Hi	s Glu	Cys	His	Phe	Pro	Asn	гаг		Met	PIO	ser	Ата
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Tyr Tyr Lys Asp Lys Ala Thr Phe Gly Cys His Asp Gly Tyr Ser Leu 215 210 Asp Gly Pro Glu Glu Ile Glu Cys Thr Lys Leu Gly Asn Trp Ser Ala 230 225 Met Pro Ser Cys Lys Ala Ser Cys Lys Val Pro Val Lys Lys Ala Thr Val Val Tyr Gln Gly Glu Arg Val Lys Ile Gln Glu Lys Phe Lys Asn 265 Gly Met Leu His Gly Asp Lys Val Ser Phe Phe Cys Lys Asn Lys Glu 280 275 Lys Lys Cys Ser Tyr Thr Glu Asp Ala Gln Cys Ile Asp Gly Thr Ile 295 290 Glu Val Pro Lys Cys Phe Lys Glu His Ser Ser Leu Ala Phe Trp Lys 310 305 Thr Asp Ala Ser Asp Val Lys Pro Cys <210> 107 <211> 1520 <212> DNA <213> Homo sapiens <220> <221> 5'UTR <222> 1..15 <220> <221> CDS <222> 16..1449 <220> <221> 3'UTR <222> 1450..1520 <220> <221> polyA_signal <222> 1483..1488 <220> <221> polyA_site <222> 1505..1520 <400> 107 cttttttttg acaag atg gcg gca gga ggc agt ggc gtt ggt ggg aag cgc 51 Met Ala Ala Gly Gly Ser Gly Val Gly Gly Lys Arg agc tcg aaa agc gat gcc gat tct ggt ttc ctg ggg ctg cgg ccc act 99 Ser Ser Lys Ser Asp Ala Asp Ser Gly Phe Leu Gly Leu Arg Pro Thr 20 15 147 tcg gtg gac cca gcg ctg agg cgg cgg cga ggc cca aga aat aag Ser Val Asp Pro Ala Leu Arg Arg Arg Arg Gly Pro Arg Asn Lys aag cgg ggc tgg cgg ctt gct cag gag ccg ctg ggg ctg gag gtt 195 Lys Arg Gly Trp Arg Arg Leu Ala Gln Glu Pro Leu Gly Leu Glu Val 50 gac cag ttc ctg gaa gac gtg cgg cta cag gag cgc acg agc ggt ggc 243 Asp Gln Phe Leu Glu Asp Val Arg Leu Gln Glu Arg Thr Ser Gly Gly 70 ttg ttg tca gag gcc cca aat gaa aaa ctc ttc ttc gtg gac act ggc 291 Leu Leu Ser Glu Ala Pro Asn Glu Lys Leu Phe Phe Val Asp Thr Gly 90 85 80 tcc aag gaa aaa ggg ctg aca aag aag aga acc aaa gtc cag aag aag 339 Ser Lys Glu Lys Gly Leu Thr Lys Lys Arg Thr Lys Val Gln Lys Lys

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tca Ser	Leu	Leu	Leu	Lys	Lys	Pro	Leu	Arg	Val	Asp	Leu 120	Ile	Leu	Glu	Asn	
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Thr	Ser	Lvs	Val	Pro	Ala	Pro	Lvs	Asp	Val	Leu	Ala	His	Gln	Val	Pro	
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Luc	Gln	Glv	Glu	Leu	Pro	Ara	Glu	Val	Arq	Arq	Ala	Gln	Ala	Arg	Leu	
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Len	Asn	Pro	Ser	Ala	Thr	Arq	Āla	Lys	Pro	Gly	Pro	Gln	Asp	Thr	Val	
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Glu	Ara	Pro	Phe	Tvr	Asp	Leu	Trp	Āla	Ser	Asp	Asn	Pro	Leu	Asp	Arg	
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cag	aag	gag	gcg	gag	aag	ctg	gag	cgg	cag	ctg	gcc	ctg	ccc	gcc	acg	867
Gln	Lys	Glu	Ala	${ t Glu}$	Lys	Leu	Glu	Arg	Gln	Leu	Ala	Leu	Pro	Ala	Thr	
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ccg	gag	gct	<b>g</b> gg	gat	gcc	gag	gtc	tgt	ccc	acg	CCC	gcc	cgc	tou	gcc	1011
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cac	cag	gag	CEG	Dho	222	LOU	Arc	, 995	Tle	Taye	, 9cc	Glr	Val	Ala	Leu	
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Arc	Thi	Lei	LV	s Pro	o Glu	Gly	Ası	ı Ile	e Let	ı Ar	g Ās	p Arg	g Phe	е Гу	s Ser	
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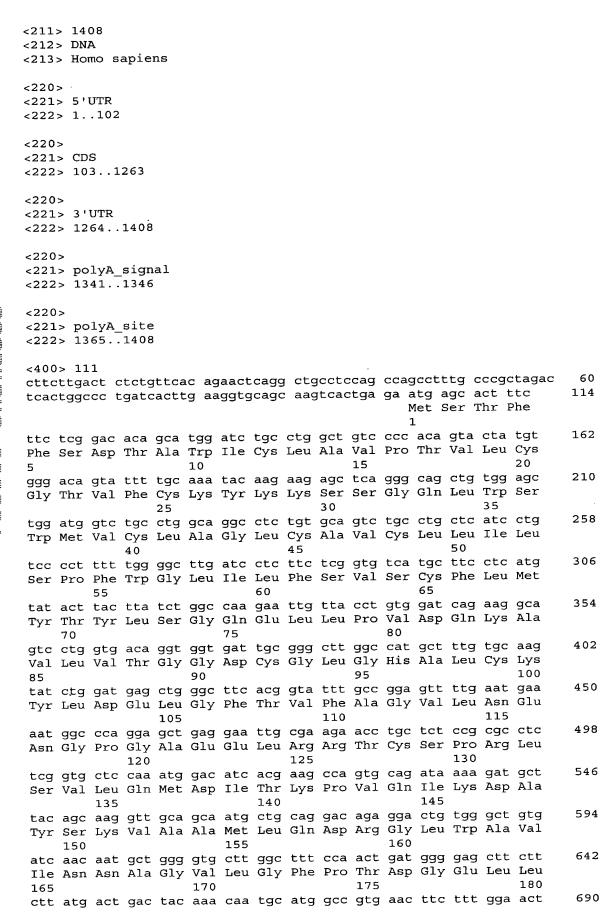
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a1	T 011	Thr	Tare	85 Lare	Δνα	Thr	Lvs	Val		Lvs	Lvs	Ser	Leu	Leu	Leu	
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Lys	Lys	Pro	Leu	Arg	Val	Asp	Leu	Ile	Leu	Glu	Asn	Thr	Ser	Lys	Val	
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Pro		Pro	Lys	Asp	Val	Leu 135	Ala	His	GIN	vai	140	ASII	Ala	Lys	БУБ	
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Leu	Pro	Arg	Glu		Arg	Arg	Ala	Gln	Ala	Arg	Leu	Leu	Asn	Pro 175	Ser	
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Ala	Tnr	Arg	180	гув	PLO	GIY	PIO	185	тър	TILL	V 44 1	010	190			
Tvr	Asp	Leu	Trp	Ala	Ser	Asp	Asn	Pro	Leu	Asp	Arg	Pro	Leu	Val	Gly	
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Gln		Glu	Phe	Phe	Leu		Gln	Thr	Lys	гàа	ьуs 220	GIY	vai	Lys	Arg	
Pro	210	Δνα	T.e.u	His	Thr	215 Lvs	Pro	Ser	Gln	Ala		Ala	Val	Glu	Val	
225					230					235					240	
Ala	Pro	Ala	Gly	Ala	Ser	Tyr	Asn	Pro	Ser	Phe	Glu	Asp	His	Gln	Thr	
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Leu	Leu	Ser	260		HIS	GIU	vai	265	ьец	GII	Arg	0111	270	Glu		
Glu	Lvs	Leu	Glu	Arq	Gln	Leu	Ala			Ala	Thr	Glu	Gln	Ala	Ala	
		275					280					285				
Thr			Ser	Thr	Phe			Leu	Cys	Glu	ι Gly	Leu	Leu	i GIu	Glu	
C	290	<b>C1</b> -	, (1)	. (2)	روايي ،	295 Pro	Glv	Gln	เติเ	glı.	300 Glv		Glu	ı Ala	Gly	
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Asp	Ala	Glu	ı Val	Cys	Pro	Thr	Pro	Ala	arg	J Lei	ı Ala	Thr	Thr	Glu	Lys	
				325	i				330	)				335		
Lys	Thr	Glu			Arg	J Arg	Arg	345 J		s Alá	ı val	. Hls	350	) леи	Arg	
۷al	Glr	Glr	340 1 Ala	, a Ala	Leu	ı Arc	Ala			, Lei	ı Arc	, His			Leu	
*41		355				-	360					365	5			

Phe Arg Leu Arg Gly Ile Ly 370 37	5	380
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Asp Lys Pro Arg Arg Leu Gl	410	415
Asp Val Gln Leu Ser Ser Gl 420	425	430
Pro Glu Gly Asn Ile Leu Ar	440	445
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Ser Phe Val Thr Ala Tyr I	ys Leu Pro Gly	7 Ile Leu Arg Trp Phe Glu 20 25
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Val Val His Met Ser Gln T	hr Thr Ile Se: 35	r Pro Leu Glu Asn Ala Ile 40
gaa acc atg tcc acg gcc a	at gag aag at	c ctg atg atg ata aac cag 30 e Leu Met Met Ile Asn Gln
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Asn Gly Ile Val Asp Pro A	Ala Val Met Gl	y Gly Phe Ala Lys Tyr Glu
75	30	85

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Lv	s i	Ala	Phe	Phe	Thr	Glu	Glu	Tyr	Val	Arg	Āsp	His	Pro	Glu	Asp	GIII	
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ga	C	aag	ctg	acc	cac	ctc	aag	gac	ctg	att	gca	tgg	cag	atc	CCC	The	499
As	p :	Lys	Leu	Thr	His	Leu	Lys	Asp	Leu	Ile	Ala	Trp	GIN	ire	120	PIIC	
				~~~	110 att	224	atc	cat	gag	115	agg	ata	t.ca	gat		ttq	547
T.C	g ·	gga	ηCt	999 Gl v	Ile	Lvs	Tle	His	Glu	Lvs	Arq	Val	Ser	Asp	Asn	Leu	
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Ar	g	Pro	Phe	His	Asp	Arg	Met	Glu	Glu	Cys	Phe	Lys	Asn	Leu	Lys	Met	
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aa	g	gtg	gag	aag	gag Glu	tac	ggt	gtc	Ara	Glu	Met	Pro	Asp	Phe	Asp	Asp	0.10
ьу	rs	155	GIU	гуя	Giu	TAT	160	Val	Arg	Olu	1100	165			L		
ac	ıa	aga	ata	aac	cgt	ccc	agg	tct	atg	ctg	cgc	tca	tac	aga	cag	atg	691
Ar	g	Arq	Val	Gly	Arg	Pro	Arg	Ser	Met	Leu	Arg	Ser	Tyr	Arg	Gln	мес	
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Se	er	Ile	Ile	Ser	Leu	Ala	Ser	Met	Asn	Ser	Asp	Cys	ser	Thr	200	ser	
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ga	ag	gtc	aag	ctg	cgg	agg	tcc	aag	aag	agg	aca	aag	aga	ger	Ser	gta Val	005
G.	lu		Lys	Leu	Arg	Arg	240		пув	Arg	TILL	245	Arg	JCI	JCI	V 44 ±	
~ t	- +-	235	aca	gat	gag	aaa			σcа	gag	tcq		ctg	aag	cgg	ctt	931
y. Va	- L - 1	Phe	Ala	Asp	Glu	Lys	Ala	Ala	Ala	Glu	Ser	Asp	Leu	Lys	Arg	Leu	
21	50					255					260	1				265	
to	CC	agg	aag	cat	gag	ttc	atg	agt	gac	acc	aac	ctc	tcg	gag	cat	gcg	979
S	er	Arg	Lys	His			Met	Ser	Asp	Thr	Asn	Leu	Ser	Glu	. ніs 280	Ala	
					270	~~~	+ a+	~+c	. ata	275		ato	age	ttt		agc	1027
g:	CC	atc	Dro	T.ell	: aay : Lvs	gcg Ala	Ser	. ycc · Val	Leu	Ser	Gln	Met	Ser	Phe	Ala	Ser	
A	та	110	· FIC	285		1110			290	1				295	i		
C	aq	tcc	: atg	cct	acc	ato	cca	gco	ctg	gcg	cto	tca	ı gtg	gca	ggc	atc	1075
G	ln	Ser	Met	Pro	Thr	Ile	Pro) Ala	Let	ı Ala	Let	ı Ser	. Val	. Ala	Gly	Ile	
			300)				305					310			. ++a	1123
C	ct	ggg	, ttg	gat	gag	gcc	aac	aca	tct	Dro	. cgc	T.E.	: ayu	Glr	n Thr	ttc Phe	1125
Ъ	ro	315		ı Asp) GIU	LAIC	320		. 561		, AL	325	5				
С	tc	caa	acto	: tca	agat	: gat	gad	aac	aag	g aca	cto	aca	cgg	aag	aag	gtc	1171
L	eu	Glr	ı Lev	Ser	Asp	Gly	, Ast	ь Гу	Lys	Thr	: Le	ı Thr	Arg	J Lys	Lys	vai	
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a	at	caç	g tto	tto	aag	g aca	ato	g cto	g gco	ago	aaa	a tco	g gct	gaa	a gaa	a ggc	1219
A	sn	Glr	n Phe	Phe			. Met	. Le	ı Ala	359	: гу	s sei	Ala	i GI	360	ı Gly	
_					350	, + ~	t ata	r too	acc			a taa	acto	acta		actaggg	1272
a T	aa	Cag	g all	Dro	a gad	Sei	Lei	ı Sei	r Thi	c Ast	Let	u u	- 5 5	,	_	334	
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t	. gg	tgg	atga	gga	agcci	ca a	acgt	agat'	CC C	Lgaa	otca:	a 991	aacc	agca	tte	atgcctt ttaggtg	1572
C	tc	cca	gtgt	gct	CTCC(cca (acat(atta	ag t	ctcae	gaac	t ta	acada	aaaa	gga	agccttt	1632
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Ile Leu Met Met Ile Asn Gln Tyr Gln Ser Asp Glu Thr Leu Pro Ile
Asn Pro Leu Ser Met Leu Leu Asn Gly Ile Val Asp Pro Ala Val Met
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Gly Gly Phe Ala Lys Tyr Glu Lys Ala Phe Phe Thr Glu Glu Tyr Val
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Arg Asp His Pro Glu Asp Gln Asp Lys Leu Thr His Leu Lys Asp Leu
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Leu Arg Ser Tyr Arg Gln Met Ser Ile Ile Ser Leu Ala Ser Met Asn
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Glu Ser Asp Leu Lys Arg Leu Ser Arg Lys His Glu Phe Met Ser Asp
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Thr Asn Leu Ser Glu His Ala Ala Ile Pro Leu Lys Ala Ser Val Leu
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 Ser Gln Met Ser Phe Ala Ser Gln Ser Met Pro Thr Ile Pro Ala Leu
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 Thr Leu Thr Arg Lys Lys Val Asn Gln Phe Phe Lys Thr Met Leu Ala
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	IIII PHE DEG	205	210	• •
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agg ctg gtg aat gtc	age age atg	gga gga ggg	Ale Dro Vol	944 495
Arg Leu Val Asn Val	Ser Ser Met	GIA GIA GIA	Ala Pro vai	GIU AIG
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Val Met Arg Leu Glu	Leu Ser Lys	Trn Glv Ile	Lvs Val Ala	Ser Ile
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245	250		acc act dac	aag tgg 930
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Gln Pro Gly Gly Phe	Leu Thr Asn	lie Ala Giy	IIII per wab	275
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Glu Asp Tyr Cys Glr	Asp Tvr Ile	Leu Ala Gln	Arg Asn Phe	Leu Leu
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Leu Ile Asn Ser Leu	. Ale Cor Ive	Nan Dhe Ser	Pro Val Leu	Arg Asp
		, Asp The ber	320	2
310	315			acg cca 1122
atc cag cat gct atc	ttg gcg aag	g age cel tit	Ale Tire Tire	Thr Pro
Ile Gln His Ala Ile	e Leu Ala Lys	s Ser Pro Pne	Ala lyr lyr	340
325	330	335		
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Gly Lys Gly Ala Ty	Leu Trp Ile	e Cys Leu Ala	His Tyr Leu	t bro rie
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Val Leu Asn Glu Asn Gly Pro Gly Ala Glu Glu Leu Arg Arg Thr Cys

